

Low Earth Orbit (Leo) Satellite Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Low Earth Orbit (LEO) Satellite Market is expected to record a CAGR of 12% during the forecast period 2023-2028

COVID-19 had a negative impact on the Low Earth Orbit (LEO) Satellite Market. The onset of COVID-19 led to a significant impact on the economic activities of countries around the world and also on the manufacturing of satellites, subsystems, and other components. Although satellite systems are critically important, the disruptions in the supply chain owing to the onset of the pandemic led to a direct impact on the manufacturing processes of low earth orbit satellites. Moreover, there have been delays and disruptions with respect to the launch activities of satellites owing to the adherence of specific launch guidelines by various countries. The decline in the pandemic has led to a decline in the disruptions to the supply chain and has led to an increase in the manufacturing of various low earth orbit satellites which have led to various countries being able to meet their launch timelines. This will lead to growth in the market during the forecast period.

There has been an increase in the demand for low-earth orbit satellites globally in recent times owing to several factors such as the growing demand for satellite miniaturization, the growing connectivity of electronic devices, the increasing demand for low-earth orbit satellite constellations across industries and increasing preferences towards software-defined payloads for communication satellites

LEO satellites are being increasingly used in commercial applications. Factors such as the miniaturization of satellites, the growing connectivity of electronic devices, and the increasing demand for low earth orbit satellite constellations across industries contribute to the growth of the LEO satellite market.

The evolution of the LEO satellite ecosystem and market is affected directly or indirectly by the policies implemented by

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governments at both the national and international levels. As of now, there is no comprehensive global or domestic system of on-orbit regulation, and there are no regulations related to on-orbit activities such as rendezvous and proximity operations, Space Situational Awareness, or RF mapping. Nevertheless, there are regulations applicable to launches and re-entries of satellites in the spectrum and remote sensing in the United States. However, operators have expressed an interest in developing regulations that would make investing more secure. Still, there are concerns about excessive regulations that might force companies to relocate from one country to another.

Low Earth Orbit (LEO) Satellites Market Trends

By End User, Civil and Commercial Segment is Expected to Witness Significant Growth During the Forecast Period.

By end user, the civil and commercial segment is expected to witness significant growth during the forecast period. Over the past decade, geospatial technology has driven the commercial sector by deploying earth imaging small satellites for usage in agriculture, education, intelligence navigation, mapping, and other fields. Microsatellites and nanosatellites assist commercial organizations in gathering real-time data from all over the globe and distributing it to their consumers over a wide geographic area at a relatively cheap cost. Further, Voice, data, movies, the internet, communication, and conferencing are some of the prominent commercial applications for micro- and nanosatellites.

Since the low earth orbit satellites are closer in proximity to the Earth resulting in the travel to and from the satellite is always shorter making it more affordable than conventional satellites. In comparison to satellites farther away, the latency for LEO spacecraft is significantly lower. Cost savings are typically also made possible by these applications' decreased size and weight limitations.

Many players, in the present scenario, have scrutinized this opportunity in the market and developed products aligning with the emerging requirements to capitalize. Many new-age startup companies have also come into the field and offering services in order to encompass a wide range of customer bases. For instance, in November 2022, Pixxel, an India-based space tech startup company announced their plans to launch six commercial satellites in batches of 6 by the end of 2023 or by early 2024. The satellite in low-Earth orbit will be 500 kilometers or so above the planet's surface. It was developed and put into operation to conduct surveillance and observational tasks in the fields of agriculture, mining, oil and gas, and climate monitoring.

Thus, such advancements will pave the way for low earth orbit satellites in commercial space over the forecast period.

The North American Region Is Expected To Witness Significant Growth During The Forecast Period

The North American region is expected to witness significant growth during the forecast period. The North American region is a market leader in the global space exploration market and is a major contributor to the market growth for Low Earth Orbit (LEO) satellites across the world. The two major countries operating in the space exploration business in the country. The United States, due to the presence and operation of the National Aeronautics and Space Administration (NASA) along with other private space-based companies like SpaceX and Blue Origins is a significant contributor to the LEO satellites market in the region.

With the rising demand for low earth orbit from various sectors like earth observation, navigation, meteorology, and military communications, the region has witnessed an increase in the number of launches of LEO satellites over the years. For instance, in January 2023, the United States SpaceX executed its 200th launch via the Falcon 9 rocket carrying a payload of 114 satellites. The satellites are scheduled to be sent into a Low Earth Orbit and function for various utilities and purposes on the ground.

Moreover, a greater need for Earth Observation and environment monitoring has driven further investments into the launch of Low Earth Orbit (LEO) Satellites. As a result, a higher number of new satellites operating in this orbit has been witnessed over the

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past years, which is anticipated to be carried into the forecast period. Similarly, Canada has been witnessing significant developments in the aspect of Low Earth Orbit satellites being sent into orbit for various purposes. For instance, in January 2023, the Low Earth Orbit Satellite - LORIS, designed and manufactured in Nova Scotia, Canada was launched by the National Aeronautics and Space Administration (NASA). The student-built satellite will be used for Intelligence, Surveillance, and reconnaissance (ISR) for Canada. Thus, such advancements will lead to growth in the low earth orbit (LEO) satellite Market in North America during the forecast period.

Low Earth Orbit (LEO) Satellites Market Competitor Analysis

Some of the prominent players in the Low Earth Orbit (LEO) Satellite Market are Space Exploration Technologies Corp., L3 Harris Technologies Inc., Planet Labs Inc., Lockheed Martin Corporation, and Northrop Grumman Corporation amongst others.

LEO satellites are a disruptive technology with the potential to revolutionize connectivity and the overall satellite communication market. The race to deploy LEO satellite constellations is increasingly competitive and will require multi-stakeholder cooperation to deliver inclusive connectivity. With more than a third of the world still offline, LEO satellite constellations can help connect the unconnected and bridge the digital divide. The competition is fierce as more governments and companies explore the potential of LEO satellite technology to provide high-speed internet across the world. Innovation through research and competitive pricing will help satellite manufacturers tap into this high-potential market during the forecast period.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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